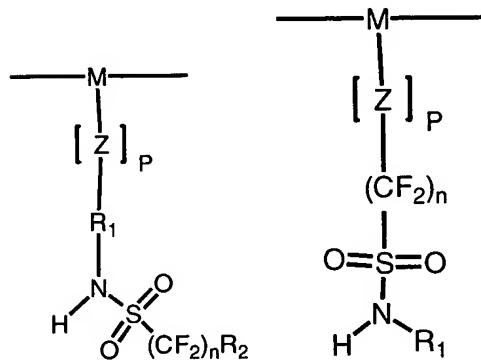


NEGATIVE RESIST COMPOSITION WITH  
FLUOROSULFONAMIDE-CONTAINING POLYMER

ABSTRACT OF THE DISCLOSURE

A negative resist composition is disclosed, wherein the resist composition includes a polymer having at least one fluorosulfonamide monomer unit having one of the following two formulae:



wherein: M is a polymerizable backbone moiety; Z is a linking moiety selected from the group consisting of -C(O)O-, -C(O)-, -OC(O)-, -O-C(O)-C(O)-O-, or alkyl; P is 0 or 1; R<sub>1</sub> is a linear or branched alkyl group of 1 to 20 carbons; R<sub>2</sub> is hydrogen, fluorine, a linear or branched alkyl group of 1 to 6 carbons, or a semi- or perfluorinated linear or branched alkyl group of 1 to 6 carbons; and n is an integer from 1 to 6. A method of forming a patterned material layer on a substrate is also disclosed, wherein the method includes applying the fluorosulfonamide-containing resist composition to the substrate to form a resist layer on the material layer; patternwise exposing the resist layer to imaging radiation; removing portions of the resist layer not exposed to the imaging radiation to create spaces in the resist layer corresponding to the pattern; and removing portions of the material layer at the spaces formed in the resist layer, thereby forming a patterned material layer.